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ABSTRACT

Designed for secondary level students, this guide describes the process of establishing utility rates for gas, electricity, telephone, or water services. Insights are presented into the parties and interests involved in rate changes, along with procedures and issues that influence decision-making. The goals of this teaching guide include: (1) understanding the basic processes of utility ratemaking; (2) learning how this process accommodates the needs of all affected constituents; and (3) refining communication, critical thinking, and decision-making skills. Lesson plans are included for two, three, and five day units. Teacher background materials, lesson notes, student worksheets, a pre-test, a post-test, a simulated case study, suggestions for expanded activities, and a nine item bibliography are included. An appended separate booklet introduces the contents of an accompanying educational videotape entitled "The Balancing Act." Key issues dealt with by the tape include: (1) utility investment; (2) the treatment of utility expenses; (3) utility profit; and (4) rate design. The roles of a utility, a regulatory commission, and residential, industrial, and commercial customers in the rate establishment process are defined, and the sequence of events that occurs in seeking increased rates is outlined. A typical rate case is simulated and a glossary of terms is included. (JHP)

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THE BALANCING ACT

How Utility Rates Are Decided

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TEACHER/FACILITATOR'S GUIDE

SO019258

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Table of Contents

Table of Contents . . . 2
Unit Summary . . . 2
Introduction to Unit (includes goals, objectives, unit formats and teacher background) . . . 2-5
Lesson Notes (2, 3) . . . 5-7
Evaluation (includes pre-/post-test and worksheet answers) . . . 8-9
Repro Section (2, 3, 5) . . . 10-21
- General Utilities Services Co. Testimony (3) . . . 10
- Gantry Consumer Federation Testimony (3) . . . 11
- Industrial Council of Gantry Testimony (3) . . . 12
- Gantry Merchants Association Testimony (3) . . . 13
- Commission Staff Testimony (3) . . . 14
- "Sequence in a Rate Case" (2, 3, 5) . . . 15
- "Worksheet #1 - 'Video Viewing Guide'" (2, 3, 5) . . . 16
- "Worksheet #2 - Student Handbook Study Guide" (2, 3, 5) . . . 17
- "Worksheet #3 - 'Who Said That?'" (3, 5) . . . 18
- "Worksheet #4 - Commission Decision" (3, 5) . . . 19
- Pre-test (2, 3, 5 - optional) . . . 20
- Post-test (2, 3, 5 - optional) . . . 21

Introduction to Facilitator's Guide (5-day format) . . . 22
Activity Notes (5) . . . 22-23
Repro Section (5-day format only) . . . 24-28
- General Utilities Services Co. Data Sheet (5) . . . 24
- Gantry Consumer Federation Data Sheet (5) . . . 25
- Industrial Council of Gantry Data Sheet (5) . . . 26
- Gantry Merchants Association Data Sheet (5) . . . 27
- Commission Staff Data Sheet (5) . . . 28

Simulation Debriefing (5) . . . 29
Suggested Unit Expansion Activities . . . 29
Bibliography . . . 30

NOTE: Numbers in parentheses indicate the appropriate unit format(s), e.g. "Lesson Notes (2, 3)" includes lesson notes for both the 2- and 3-day unit formats.

The Balancing Act: How Utility Rates Are Decided

This high school unit describes the balancing act involved in setting utility rates, whether they be for natural gas, electricity, telephone or water. It gives students insight into the parties and interests that come into play whenever utility rate changes are being considered. Students also learn the basic procedures involved and the issues that influence a ratemaking decision.

The Balancing Act has a flexible format which can be completed in two, three or five days. The three- and five-day units include additional activities to help develop critical thinking skills. Principal components include a videotape, 40 reusable student books and this teacher's guide.

Introduction

Using utility ratemaking as a subject offers a variety of educational opportunities which provide students with valuable learning experiences, as an adjunct to other courses which might be taught, including Consumer Education, Social Science, American Government, Economics and Debate. Please note that the procedures and regulatory provisions used in this mini-course are representative of the utility ratemaking systems of most states. *However, variations prevail in some states. It is suggested that you contact your state commission or local utility to determine any differences in your state.* Try to acquire any basic information brochures which outline the ratemaking procedures in your state.

The subject of utility ratemaking is not one normally taught in a high school curriculum. However, there are several reasons why it should. To begin with, the study of utility ratemaking has merit in and of itself. The cost of utility services has risen over the years and it is important that consumers understand how the rates for these services are established. With the increased emphasis on consumer literacy in the curriculum, few budget areas compare with the costs of home energy or water or telephone service for dramatic impact on budgets. Concern over the escalation of these costs has been compounded by a notable lack of understanding as to how the prices for these services are set and controlled.

Second, this study of the ratemaking process explains how and why regulated monopolies are authorized and operate. Students who have been schooled in the advantages of the free market system need to understand that there are exceptions to the rule... and for good reasons. By looking at the process, the participants and the procedures, it will become apparent that both consumers and utilities benefit, and relatively equally, from the system. The study will further underscore why, as well as how, this process works as it does. Hence, study of the ratemaking process augments and complements both the economics and civics curricula.

Finally, the unit as designed will allow the students to place themselves in the position of the decision-makers. By studying the data, considering the alternatives and selecting one option, they will have an excellent opportunity to practice valuable critical thinking skills, another vital area of current educational concern.

The following goals and objectives have been designed to reflect these educational concerns. Naturally, the degree to which the students achieve the objectives is directly related to the unit option selected, the amount of time spent and the emphasis the teacher places on them in the activities and discussions. One way to assure that attention is paid to the objectives is to share them with the students at the beginning of the unit, refer to them periodically throughout the course of the unit and discuss their attainment during the debriefing session.

Goals:

1) To understand the basic process of utility ratemaking. (Ratemaking and the Consumer)
2) To learn how this process accommodates needs of all constituents affected by the procedure. (The Ratemaking Process)
3) To further refine communication, critical thinking and decision-making skills. (Critical Thinking Skills - not included in the 2-day unit)

Objectives:

The student will be able to:

1) **Define** the term "regulated monopoly," and **apply** it to a utility.
2) **Differentiate** between which utility functions are regulated by state commissions and which are not.
3) **Describe** the role of state regulatory authorities in balancing the needs of the public and utilities.
4) **Assess** the role of state regulatory commissions in assuring utility efficiency and the economic benefits to customers.
5) **Explain** how a utility prepares a rate case.
6) **Analyze** the key issues in a typical rate case, including those involving the utility investment in property and equipment, treatment of expenses, utility profit and rate design (allocation of costs).
7) **Identify** the principal participants in a rate case.
8) **Evaluate** the merits of various positions involved in a simulated rate case.

Unit Formats:

Three formats have been developed for this unit. The 2-day unit contains the basic information on the subject. The 3-day unit expands upon the content of the 2-day format by adding an abbreviated simulation activity. Depending upon the time available and the degree to which the subject complements the curriculum, the unit may be lengthened further to include greater student role playing in the simulation as provided in the 5-day format. All three formats are outlined below. Lesson plans for the 2- and 3-day versions are presented on pages 5-6; the 5-day unit is discussed in a separate section of this guide, beginning on page 22.

Obviously, the 2-day unit is limited in its scope. Two days is sufficient time to dispense the basic information on the ratemaking process but little else. The longer units allow and provide for activities which foster the development of critical thinking skills. Also, due to the complexity of the content, the allocation of more time permits a slower pace to accommodate a variety of student ability levels.

If even more time is deemed necessary or desirable, the lesson plans lend themselves to being spread over more days than specified, thereby slowing down the pace with which the students must assimilate the information. Finally, if the content load is still too much for the class to handle, the more difficult concepts (such as operating costs, investment base, rate of return, etc.) may simply be deleted from consideration.

TWO-DAY UNIT

Day One
- Pre-test (optional)
- Unit introduction
- **Student Handbook**
- "Worksheet #1 - Video Viewing Guide"
- "The Balancing Act" video
- Video/"Worksheet #1..." discussion
- "Sequence in a Rate Case" repro sheet
- Homework:
  - "Worksheet #1...," Section D
  - **Student Handbook**, pp. 4-8

Day Two
- "Worksheet #1...," Section D discussion
- "Worksheet #2 - Student Handbook Study Guide"
- "Worksheet #2..." discussion
- Unit conclusion
- Post-test (optional)

THREE-DAY UNIT

Day One
- Pre-test (optional)
- Unit introduction
- **Student Handbook**
- "Worksheet #1 - Video Viewing Guide"
- "The Balancing Act" video
- Video/"Worksheet #1..." discussion
- "Sequence in a Rate Case" repro sheet
- Homework:
  - "Worksheet #1...," Section D
  - **Student Handbook**, pp. 4-8

Day Two
- "Worksheet #1..." Section D discussion
- "Worksheet #2 - Student Handbook Study Guide"
- "Worksheet #2..." discussion
- Simulation assignments
- Homework:
  - Testimony scripts

Day Three
- "Worksheet #3 - Who Said That?"
- Rate case hearing simulation
- "Worksheet #3..." discussion
- "Worksheet #4 - Commission Decision"
- "Worksheet #4..." discussion
- Unit conclusion
- Post-test (optional)

FIVE-DAY UNIT

Day One
- Pre-test (optional)
- Unit introduction
- **Student Handbook**
- "Worksheet #1 - Video Viewing Guide"
- "The Balancing Act" video
- Video/"Worksheet #1..." discussion
- "Sequence in a Rate Case" repro sheet
- Homework:
  - "Worksheet #1...," Section D
  - **Student Handbook,** pp. 4-8

Day Two
- "Worksheet #1...," Section D discussion
- "Worksheet #2 - Student Handbook Study Guide"
- "Worksheet #2..." discussion
- Simulation assignments
- Role data sheets
- Homework:
  - Role research

Day Three
- Simulation preparation

Day Four
- "Worksheet #3 - Who Said That?"
- Rate case hearing simulation
- "Worksheet #3..." discussion

Day Five
- "Worksheet #4 - Commission Decision"
- "Worksheet #4..." discussion
- Simulation debriefing
- Unit conclusion
- Post-test

Teacher Background Material

Simulation Background

The focus of the activity in **The Balancing Act** is a scheduled 6% increase in the rates the General Utilities Services Company is charging its customers for natural gas. The utility already has been granted the increase by the Public Utilities Commission (P.U.C.), but now a decision has to be made as to how much of the increase each group of customers should pay.

The area served by General Utilities is known as Gantry, and the three groups actively involved are: the Gantry Merchants Association, the Gantry Consumer Federation and the Industrial Council of Gantry. Each group opposed the size of the rate increase originally sought by the utility, and succeeded in convincing the Public Utilities Commission to reduce the amount of the increase by two percent—from the eight percent requested by the utility down to the six percent approved by the P.U.C.

General Utilities has proposed spreading the increase evenly among all three types of customers. But each of the three customer groups is now competing against the others. Their goal is to reduce their own overall percentage and minimize the impact of the rate increase on their particular group. Each group feels it is already paying its fair share of the utility bills, and is urging the Public Utilities Commission to put the increase on the other groups, or to reconsider the rate increase it has granted to General Utilities.

This situation has been made worse by a rather recent and rapid decline in the local economy. Gantry primarily is a one industry town. Three firms, all manufacturing the same basic product, have employed 30% of Gantry's workforce.

Over the last few years, the demand for their product has declined dramatically. Consequently, one of the three manufacturers recently went bankrupt and the other two had to lay off much of their workforces. This has put economic pressure on all of Gantry's businesses—including General Utilities.

A major factor in General Utilities' expenses has been an unprecedented rise in "uncollectibles"—utility bills some of its customers cannot or will not pay. Unlike most businesses, utilities bill their customers **after** service is provided. The rapid increase in unemployment in Gantry has resulted in a sharp rise in the utility's uncollectibles.

The key issue in the students' rate design task is to determine who (what group of gas customers) should pay for what portion of these uncollectibles.

This, then, is **The Balancing Act, How Utility Rates Are Decided.** By studying these issues and how they are resolved, the students will be exposed to an important process which affects their lives every day.

Classroom Techniques

In order to make this unit relevant to the students, it is essential that they understand how they are, and will be, personally affected by utility rates. Perhaps the easiest way to accomplish this is by noting how many ways our lives are touched on a daily basis by the services of utilities. We all take for granted the availability of natural gas, electricity, water and telephone services—these services are an integral part of modern life. As with any other commodity, along with the utility service comes a bill. Whether or not the students personally pay the bills, the fact remains that they all benefit directly from these services, and almost certainly will be paying utility bills in the future.

An effective technique for bringing the unit closer to home is to use local examples. For instance, in discussing industrial activity, focus on regional companies and concerns, such as steel in the Midwest, lumber in the Northwest or oil in the Southwest. Local examples allow the students to talk knowledgeably about familiar subjects and this naturally makes the study more relevant for them.

The students also need to appreciate the indirect impact of telephone, water, gas and electric utility services on their lives. Virtually every endeavor in our society is touched in some way by energy, water and telephones. The goods and services provided by industry and sold by commercial establishments depend upon utilities as much as individual consumers do.

It is suggested that teachers request students to talk about rates and utility bills with their parents the night before the mini-course begins. This should sharpen awareness of concerns and develop an awareness of the lack of knowledge and understanding of the regulatory process.

Student Information

In order for the students to comprehend the scope of utility service impact, it might be well to spend a few minutes during the unit introduction on Day One (in all three formats) discussing the significance of utility services. Have the students stop and consider for a minute how often they have used a utility service thus far today. By simply enumerating these uses, the point should be made regarding the importance of public utilities in their lives.

Students should also be made aware of the financial impact of utilities on their lives. About $1 out of $10 of the average family's disposable income is spent for electric, gas, water and telephone services, and in low income families the percentage of income may be higher. Point out that a family with an annual income of $25,000 might thus expect to pay upwards of $2500 per year for utility services. Despite the sizable impact of these bills on their lives, few consumers have any understanding of utility regulation.

Next, you might ask students if they are aware of the Public Service Commission, Public Utility Commission or other regulatory body in your state. Inquire if any of the students know the function of utility regulatory commissions and how they go about doing their jobs. As an extension of this discussion, you may wish to contrast the means by which prices are usually established in a free market situation versus regulation of utility rates. Students may be interested in knowing that in a free market economy, if a manufacturer tries to raise prices too much, the competition, charging less, will capture a greater share of the market. The first company must lower prices or settle for a diminished market share and possibly go out of business. For utilities, operating as monopolies, that type of price competition historically has not existed. Regulation, therefore, takes the place of direct competition.

The bottom line as far as the consumer is concerned in all of this is that utilities provide us with essential services and for these services we must pay a fair price. This price, in the case of most utilities, is one carefully reviewed by the commission which regulates them and authorizes their rates. This ratemaking process, in essence, is a "balancing act" in which the regulatory commission must consider interests and requirements of consumers and utilities alike to assure the availability of essential services.

Lesson Notes

The following lesson plans suggest daily schedules and instructional strategies for the 2- and 3-day unit formats. Obviously, every classroom is unique and, therefore, modifications of the timetables and/or procedures may be required.

TWO-DAY UNIT

Day One

1. You may wish to begin the unit by administering the optional pre-test. This test may be reproduced from page 20 of this guide; the answers are provided on page 8.
2. Introduce the subject of utility ratemaking and relate it to the current Course of Study as appropriate. You might use a motivating device or event to initiate the study, e.g., showing and discussing an actual utility bill, or a having guest speaker from the P.U.C. or a local utility. Another possibility is to give the pre-test (if it is used) on one day and have the students interview their parents on the ratemaking process that evening before beginning the unit on the next day.
3. Continue the lesson by discussing how everyone is affected by utility services and the price we pay for these services. Note the section, "Teacher Background Material," found on page 4 of the unit introduction. Additional supplementary information is available in the booklet, **New Guide to Utility Ratemaking,** included in this kit.
4. Hand out the **Student Handbooks.** Note that this publication contains:
   a. Introduction to "The Balancing Act" video, page 3.
   b. Description of the participants and procedures in a rate case, pages 4-8. In introducing the procedures in a rate case, it is best to turn to pages 6-8 of the **Student Handbook** and actually walk the students through the chart, noting the chronological sequence of events and the division of activities between the four groups noted.
   c. Scenario of a typical rate case, page 9.
   d. Unit glossary, pages 10-13. Note: Due to the specialized nature of the unit's content, it is critical that the students study and learn the ratemaking terminology. Hence, the glossary is very important. In fact, it might be necessary to spend some extra time throughout the activities discussing new vocabulary and what these terms mean in the context of the subject matter.
5. Have the students read "Introduction to 'The Balancing Act' Video."
6. Hand out and assign "Worksheet #1 - Video Viewing Guide." Note: Sections A, B and C should be completed as the video is shown. Section D should be completed after viewing the video.
7. Show the videotape, "The Balancing Act," as a basic introduction to the unit. Due to the heavy content load, it is recommended that the video be shown in three segments as defined below.
   a. This section deals with the **rationale of rate regulation** - the types of utilities regulated; why utility rates are regulated; why competing systems are financially impractical; why government's regulation is important; commonalities among approaches of all states. Have the students complete Section A of "Worksheet #1..." while viewing the section. Stop the video at the end of Betty Rankin's statement which concludes: "This profit is based only on the dollar value of the investment the utility has made in its property and equipment, not on the cost of the fuel—the natural gas, coal or oil it purchases to serve its customers, nor on the wages or salaries it pays its employees." The screen will be showing the graphic, "RESPONSIBILITIES OF REGULATORY COMMISSIONS. . ." Once the video has been stopped, discuss the students' answers in Section A of "Worksheet #1. . ." and the concepts presented. (Answers to the worksheet are provided on page 8 of this guide.)

b. This section discusses **how rates are set** - major components of a typical utility rate: operation expenses, utility investment, profit and rate design, and their composition; and **ratemaking procedures** - steps involved in the rate case process. Have the students complete Section B of the worksheet while viewing the section. Stop the video at the end of Betty Rankin's statement which concludes: "Next comes testimony from the commission staff, utility customers and other interested groups, called 'intervenors.' They, in turn, cross-examine each other and the utility." The screen will be showing the graphic, "REVIEWING UTILITY RATES..." Once the video has been stopped, discuss the students' answers in Section B of "Worksheet #1..." and the concepts presented. It is important to note the difference between **making a profit possible** and **guaranteeing a profit.** The commission must make it possible for the utility to make a profit; however, it does not guarantee one. Use the "Sequence in a Rate Case" repro sheet (found on page 15 of this guide) to highlight the major steps in the ratemaking process. Note any variations present in your state which differ from those described in this unit.

c. This section deals with **rate case arguments** -typical types of groups testifying at rate hearings: utility, residential consumers, retail merchants, industry, and commission staff. Have the students complete Section C of the worksheet while they view this section. Once the video has been completely shown, discuss the students' answers in Section C of "Worksheet #1..."

8. Assign the following homework:
   a. Complete "Worksheet #1 - Video Viewing Guide," Section D.
   b. Read "Participants in a Rate Case" and "Procedures in a Rate Case," pages 4-8 of the **Student Handbook.**
   c. Have the students check local newspapers for articles on utility rates. These should be brought to class tomorrow for sharing.

Day Two

1. Discuss the students' answers to Worksheet #1...," Section D. (Answers to the worksheet are provided on page 8 of this guide.) Given the emphasis of Section D, this is a good time to review other unit vocabulary, too.
2. Have the students share any of the utility rate articles they found in the newspaper. Note what significance they see in this news.
3. Divide the class into small groups of three-four students each.
4. Hand out and assign "Worksheet #2 - Student Handbook Study Guide" to be completed by the groups or by individual students.
5. Once the class has completed the worksheet, discuss the answers. (Answers are found on page 8.)
6. Conclude the unit by answering any remaining student questions.
7. (Optional) Administer the unit post-test. This test may be reproduced from page 21 of this guide; the answers are found on page 8.

THREE-DAY UNIT (Enhanced Critical Thinking Elements)

Day One

1. You may wish to begin the unit by administering the optional pre-test. This test may be reproduced from page 20 of this guide; the answers are provided on page 8.
2. Introduce the subject of utility ratemaking and relate it to the current Course of Study as appropriate. You might use a motivating device or event to initiate the study, e.g., showing and discussing an actual utility bill, or having a guest speaker from the P.U.C. or a local utility. Another possibility is to give the pre-test (if it is used) on one day and have the students interview their parents on the ratemaking process that evening before beginning the unit on the next day.
3. Continue the lesson by discussing how everyone is affected by utility services and the price we pay for these services. Note the section, "Teacher Background Material," found on page 4 of the unit introduction. Additional supplementary information is available in the booklet, **New Guide to Utility Ratemaking,** included in this kit.
4. Hand out the **Student Handbooks.** Note that this publication contains:
   a. Introduction to the "The Balancing Act" video, page 3.
   b. Description of the participants and procedures in a rate case, pages 4-8. In introducing the procedures in a rate case, it is best to turn to pages 6-8 of the **Student Handbook** and actually walk the students through the chart, noting the chronological sequence of events and the division of activities between the four groups noted.
   c. Scenario of a typical rate case, page 9.
   d. Unit glossary, pages 10-13. Note: Due to the specialized nature of the unit's content, it is critical that the students study and learn the ratemaking terminology. Hence, the glossary is very important. In fact, it might be necessary to spend some extra time throughout the activities discussing new vocabulary and what these terms mean in the context of the subject matter.
5. Have the students read "Introduction to 'The Balancing Act' Video."
6. Hand out and assign "Worksheet #1 - Video Viewing Guide." Note: Sections A, B and C should be completed as the video is shown. Section D should be completed after viewing the video.
7. Show the videotape as a basic introduction to the unit. Due to the heavy content load, it is recommended that the video be shown in three segments as defined below.
   a. This section deals with the **rationale of rate regulation** - the types of utilities regulated; why utility rates are regulated; why competing systems are financially impractical; why government's regulation is important; commonalities among approaches of all states. Have the students complete Section A of "Worksheet #1..." while viewing the section. Stop the video at the end of Betty Rankin's statement which concludes: "This profit is based only on the dollar value of the investment the utility has made in its property and equipment, not on the cost of the fuel—the natural gas, coal or oil it purchases to serve its customers, nor on the wages or salaries it pays its employees." The screen will be showing the graphic, "RESPONSIBILITIES OF REGULATORY COMMISSIONS..." Once the video has been stopped, discuss the students' answers in Section A of "Worksheet #1..." and the concepts presented. (Answers to the worksheet are provided on page 8 of this guide.)

b. This section discusses **how rates are set** - major components of a typical utility rate: operation expenses, utility investment, profit and rate design, and their composition; and **ratemaking procedures** - steps involved in the rate case process. Have the students complete Section B of the worksheet while viewing the section. Stop the video at the end of Betty Rankin's statement which concludes: "Next comes testimony from the commission staff, utility customers and other interested groups, called 'intervenors.' They, in turn, cross-examine each other and the utility." The screen will be showing the graphic, "REVIEWING UTILITY RATES..." Once the video has been stopped, discuss the students' answers in Section B of "Worksheet #1..." and the concepts presented. It is important to note the difference between **making a profit possible** and **guaranteeing a profit.** The commission must make it possible for the utility to make a profit; however, it does not guarantee one. Use the "Sequence in a Rate Case" repro sheet (found on page 15 of this guide) to highlight the major steps in the ratemaking process. Note any variations present in your state which differ from those described in this unit.

c. This section deals with **rate case arguments** -typical types of groups testifying at rate hearings: utility, residential consumers, retail merchants, industry, and commission staff. Have the students complete Section C of the worksheet while they view this section. Once the video has been completely shown, discuss the students' answers in Section C of "Worksheet #1..."

8. Assign the following homework:
   a. Complete "Worksheet #1 - Video Viewing Guide," Section D.
   b. Read "Participants in a Rate Case" and "Procedures in a Rate Case," pages 4-8 of the **Student Handbook.**
   c. Have the students check local newspapers for articles on utility rates. These should be brought to class tomorrow for sharing.

Day Two

1. Discuss the students' answers to "Worksheet #1..." (Answers to the worksheet are provided on page 8 of this guide.) Given the emphasis of Section D, this is a good time to review other unit vocabulary, too.
2. Have the students share any of the utility rate articles they found in the newspaper. Note what significance they see in this news.
3. Divide the class into small groups of three-four students each.
4. Hand out and assign "Worksheet #2 - Student Handbook Study Guide" to be completed either by the groups or by individual students.
5. Once the class has completed the worksheet, discuss the answers. (Answers are found on page 8.)
6. Reconfigure the students into five groups. Assign one of the following simulation roles to each group: utility, commission staff, consumers, industry, retail merchants. Note: If it is appropriate, role assignments may be given to individual students rather than to groups. However, the use of several students on a single role makes it easier for lower level students to participate without having the entire role responsibility. Individual role assignments also take more time in the hearing presentations on Day 3.
7. Hand out the testimony scripts to the groups. These scripts provide each group's testimony for the rate case hearing. They are to be reproduced from pages 10-14 of this guide. Students should be encouraged to add to or modify the testimonies to reflect their own views and personalities. In fact, if desired, the students may use the appropriate data sheets (provided on pages 24-28 of this guide) to write their own testimonies.
8. Assign the study of the role scripts for homework.

Day Three

1. Hand out and assign "Worksheet #3 - Who Said That?" to be done during the rate case hearing simulation. Point out to the students that this activity requires them to exercise some analytical skills. Their answers must reflect an understanding of what a particular group might have said. And where two groups may be responsible for the same statement, a process of elimination, using the remaining quotations, might be necessary.
2. Conduct the rate case hearing simulation as follows:
   a. Have a spokesperson for each group read the group's statement from their testimony scripts. Begin with the presentation of the utility, followed by the consumer group, the industry group, the retail merchants group and conclude with the commission staff representative.
   b. Make sure that the students listen carefully to each presentation and complete the answers required on "Worksheet #3..."
3. Once the testimonies have been completed, discuss the student answers to "Worksheet #3..." (Answers are found on page 9.) Be sure that they explain how they arrived at their conclusions, based on the available data and documentation.
4. Hand out "Worksheet #4 - Commission Decision" and have the students, now acting as commissioners, make a decision on the new rate design. Note that they are required to provide justification for their decisions. Students may use "Worksheet #3..." in completing "Worksheet #4..." Since the change of roles may be confusing to some students, be sure that they understand their new position as a commissioner before they begin to complete the worksheet. Emphasize that, as in this situation, commissioners frequently are former consumer group spokespersons, business people, academics or civic leaders.
5. Conclude the unit by discussing the students' conclusions on "Worksheet #4..." and answering any remaining questions. You may wish to average the students' percentages to calculate a consensus rate design.
6. (Optional) Administer the unit post-test. This test may be reproduced from page 21 of this guide; the answers are found on page 8.

FIVE-DAY UNIT (See page 22.)

Evaluation

The unit evaluation package has been designed to systematize the scoring of student participation throughout the activity. It is offered as a suggestion only and teachers should feel free to modify or ignore it as appropriate.

Please take special note of the "Teacher Response Form" provided in the kit. To determine the effectiveness of the unit, and how it might be improved in future versions, it would be appreciated if you would take a few minutes and provide the requested information. Fill out the postage paid, self-addressed form with the pre- and post-test scores, as well as your ideas for improving the unit.

PRE- AND POST-TEST ANSWERS:

Unit pre- and post-tests have been provided, should you wish to use them, but the scores should not be used for the purpose of grading. They do reflect, however, how well the students have achieved the unit objectives. This information might serve as a point of discussion in the unit debriefing, if the simulation activity was used. As mentioned above, these test results are also of interest to the organization which provided the unit for your use. Please share them with your sponsor.

Pre-test	Post-test
Multiple Choice	Multiple Choice
1) **d**	1) **d**
2) **b**	2) **c**
3) **a**	3) **a**
4) **b**	4) **a**
5) **c**	5) **d**
Matching	Matching
1) **D**	1) **C**
2) **B**	2) **F**
3) **F**	3) **B**
4) **A**	4) **G**
5) **G**	5) **A**
6) **C**	6) **D**

WORKSHEET ANSWERS:

Worksheet #1 - Video Viewing Guide

Section A

1. Cite three types of utilities regulated by your state.
   a. Gas
   b. Electricity
   c. Water
   d. Telephone
2. Name two major responsibilities of a Public Services Commission.
   a. Protect the consumer by keeping rates affordable.
   b. Protect the utility by approving a reasonable rate of return to assure its financial viability.

Section B

1. Cite two of the three key elements involved in most rate cases.
   a. Utility's operating costs
   b. Total investment in property and equipment
   c. Amount of profit allowed utility
2. Number the following rate case events in their proper order.
   __**4**__ Hearings are conducted on the rate case.
   __**7**__ New rates go into effect.
   __**1**__ Utility files rate case petition.
   __**6**__ Commission issues rate order.
   __**2**__ Commission staff assigned to review the rate case.
   __**3**__ Commission staff requests additional information from utility.
   __**5**__ Examiner makes recommendations to full commission.

Section C

1. List the three key issues involved in the General Utilities rate case.
   a. Did the utility pick a representative test year?
   b. Were the utility's reported operating expenses reasonable and prudent?
   c. Is the profit level the utility is seeking reasonable, given recent changes in the local economy?
2. Name three groups which would be likely to testify at a rate case hearing.
   a. Utility
   b. Commission staff
   c. Consumer group
   d. Industrial group
   e. Commercial group
   f. Environmental group

Section D

1. Match the correct phrase on the right with its corresponding term on the left.
   __**F**__ 1. test year
   __**D**__ 2. rate design
   __**I**__ 3. intervenors
   __**B**__ 4. profit
   __**H**__ 5. regulated monopoly
   __**A**__ 6. examiner
   __**E**__ 7. rate case
   __**C**__ 8. commission

Worksheet #2 -Student Handbook Study Guide

I. Participants in a rate case.
   A. The Utility - the agency **APPLYING** for an increase in rates.
   B. The Regulatory Commission - the body responsible for assuring consumers of adequate and reliable service at **REASONABLE** rates.
   C. The Intervenors - groups which represent the three **TYPES** of utility customers and other interested parties.

II. Procedures in a rate case.
   A. Utility decides to file rate case.
      1. Utility serves public notice of **INTENT.**
      2. Collects and **ADJUSTS** test year data.
   B. Commission studies utility petition.
      1. Commission assigns staff to review **PETITION.**
   C. Interested parties become involved in process.
      1. **CONSUMER** groups and others request information from utility.
   D. Commission conducts formal rate hearings.
      1. Commission appoints **EXAMINER.**
   E. Commission issues **RATE ORDER.**

III. Glossary

A. APPEAL - request by any party in a rate case for **RECONSIDERATION** by the courts of a commission decision.
B. **HEARING** - public meeting at which a utility, intervenors and the commission staff present their arguments on a proposed rate increase.
C. RATE BASE - amount of **MONEY** a utility has invested over the years in facilities that serve the customers.
D. RATE CASE - proceeding before a **REGULATORY** commission by which a utility seeks a change in the rates it charges its customers.
E. **SUSPENSION** - delay in putting a rate increase into effect until the commission can study and rule on it.
F. TRANSCRIPT - written record of a rate case **PROCEEDINGS.**

Worksheet #3 - "Who Said That?"

1. Gantry Consumer Federation
2. Industrial Council of Gantry
3. General Utilities Services Co.
4. Commission staff
5. Industrial Council of Gantry
6. General Utilities Services Co.
7. Gantry Merchants Assn.
8. Gantry Consumer Federation
9. Commission staff
10. Gantry Merchants Assn.

Worksheet #4 - Commission Decision

Whether or not the students alter the present balance of sharing costs, they should: 1) demonstrate that they have carefully considered each argument, 2) evaluate the testimonies for legitimate assertions vis-a-vis questionable and excessively self-serving contentions, and 3) weigh to what extent, if any, one class should be granted a lower rate at the expense of higher rates for others.

CLASS DISCUSSION:

The major planned discussion of this unit follows the viewing of the videotape. It is well to remember that the value of such an activity goes beyond merely responding with the correct answers. Indeed, sometimes the most significant comments, in terms of displaying student comprehension, are the questions they ask.

Other formal discussions are scheduled following the completion of Worksheets #1 and #2 in all three formats, Worksheets #3 and #4 in the three- and five-day units and in the simulation debriefing in the five-day format. Naturally, it is expected that spontaneous discussions will occur as time permits.

SIMULATION PARTICIPATION:

Participation in the five-day unit's simulation activity provides an opportunity to evaluate a variety of student skills. These will be displayed both during the simulation preparation as well as in its presentation.

Simulation Preparation (20 points) - Essentially this area covers the student's work in helping develop the group's case. It includes the skill with which research is conducted, data gathered and the ensuing arguments formulated.

Simulation Presentation (55 points) - Evaluation of student participation in the formal testimony might be more difficult to assess, especially if some of the group assume background responsibilities and others make the actual presentation. In such cases, it may be simpler to give the same number of points to each member of the group. In any event, the evaluation should include the following areas:

Role Playing (10 points) - How well did the students act out the ascribed personality of their group?

Use of Data (20 points) - How effectively did the group use data provided in the unit materials and outside sources to support its case?

Strength of Arguments (20 points) - To what extent did the group construct persuasive arguments, using its data, to achieve its objectives?

Quality of Presentation (5 points) - How polished and effective was the group's hearing testimony?

UNIT SCORING SYSTEMS:

Each of the three formats has its own scoring system. They are as follows:

Two-day Unit
- Worksheet #1 - 28 points
- Worksheet #2 - 30 points
- Class discussion - 17 points
- TOTAL - 75 points

Three-day Unit
- Worksheet #1 - 28 points
- Worksheet #2 - 30 points
- Worksheet #3 - 30 points
- Worksheet #4 - 40 points
- Class discussion - 22 points
- TOTAL - 150 points

Five-day Unit
- Worksheet #1 - 28 points
- Worksheet #2 - 30 points
- Worksheet #3 - 30 points
- Worksheet #4 - 40 points
- Class discussion - 47 points
- Simulation participation - 75 points
- TOTAL - 250 points

General Utilities Services Company Testimony

Ladies and Gentlemen of the Commission and fellow parties to this rate case. My name is (insert your name here), and I represent the General Utilities Services Company, which has been granted a six percent increase in the rates we charge our customers for natural gas.

I wish to point out, first of all, that in our rate petition and subsequent testimony we have sought to increase the rates of all types of customers by an equal percentage. We think spreading the rate increase across the board is fair and equitable to all concerned. Clearly, we should not penalize anyone at this time by placing a disproportionate share of the increase on any single group of customers—residential, commercial or industrial users.

As to the specific problem of uncollectibles, let me point out that this is a problem for all companies that offer credit to their customers. It's just a cost of doing business. Some will argue that our stockholders should bear some of these uncollectible costs. I can only say that any further absorption of costs by us in the rate increase which this Commission already has granted would be both unprecedented and unfair. We have already had our request cut by approximately one fourth. To now ask us to give up even more would seriously damage our standing in the financial community and, consequently, our efficiency of operations. This probably would result in even higher costs to our customers in the future. At the same time, it would prevent us from providing the quality of service our customers have come to expect.

More importantly, however, let me point out that other businesses can adjust their prices to cover their anticipated uncollectible accounts. Our prices are set by the Commission. Furthermore, other businesses can cut off credit to customers who don't pay their bills. The Commission has ordered that we cannot terminate service to any delinquent customer during the winter months. Therefore, since we are not permitted to either control uncollectibles or raise our prices when uncollectibles increase, it would be unfair to force our stockholders to pay for them.

We are never anxious to raise our rates, but I think it is only fair to point out that this is the first increase in three years. Furthermore, to take money from our stockholders is to take money from the pockets of members of this very community, since many of our shareholders live right in Gantry. Some are senior citizens, who are least able to afford any loss of dividend income. I should point out that reduced profitability also would affect the cash flow of the municipal government's retirement fund, which has invested in our stock.

To summarize, it is our utility's firm belief that we should be allowed immediately to begin billing all customers at rates which are six percent higher than existing rates. I thank you for your consideration.

Gantry Consumer Federation Testimony

Ladies and Gentlemen of the Commission and staff, I thank you on behalf of the people of Gantry for this opportunity to present to you the case for the people who ultimately pay the bill for industry's problems, mistakes and misfortunes. That bill payer is, of course, the residential customer of General Utilities Services Company.

My name is (insert your name here), and I represent the Gantry Consumer Federation, a coalition of people whose goal is simply to make our community a better place in which to live. When we lose a job, or money, or have some other financial setback, our usual recourse is not to seek a tax break or a handout. Our recourse is to tighten our belts and make do until better times come.

Let me point out that "business" is bad for us, too. We have the highest rate of unemployment in recent years, jobs are disappearing, the costs of living are going up, and now we are being asked to subsidize the unpaid bills of one of the biggest moneymakers in the community—the General Utilities Services Company. Before you consider who will shoulder the burden of the utility's 6% rate increase, we urge your reconsideration of the decision to grant that increase. General Utilities' stockholders are in a much better position than its already beleaguered residential customers to financially support the company. Reduce their return. Let them fairly share the hardships facing Gantry with us.

If you will not reconsider your decision, then any increase in rates must be paid by the utility's industrial customers. We urge you to consider several facts. First, the main reason the economy is suffering right now is that our major industry has failed to remain competitive. It has lost business to outsiders, resulting in layoffs and hard times for the rest of us. The increase in uncollectibles is a direct result of industry's mismanagement. Since the problem was caused by industry, we urge that you lay any increase in utility rates back in the laps of those who cause it, our industrial sector. We should not be asked to pay for facilities built to serve customers who no longer buy anything from General Utilities. Industry is in a better position to afford it anyway, because utility costs are deductible for tax purposes which means a higher utility rate costs them only a fraction of what it costs those of us who have no protective corporate veil.

In short, we ask simply that you consider the cause and effect of this rate increase, and spare the residential customer, who is least responsible for the problem and least able to pay.

Industrial Council of Gantry Testimony

Commissioners and fellow parties to this rate case; my name is (insert your name here). I represent the Industrial Council of Gantry, and, ladies and gentlemen, those we represent here today are in deep trouble. As you are undoubtedly aware, Amerigard/Harwood Incorporated recently was forced out of business by lack of sales, putting nearly five percent more of our area's work force out of jobs.

In addition, our other two major employers, Camgren Products and Johnson/Fletcher Incorporated have laid off a combined total of 3100 workers. Gantry's jobless rate is now 10 percent. This is a severe blow to the local economy, and a human tragedy. Both companies are struggling just to stay in business by cutting their operation costs wherever they can. The tragedy will be worsened if these two companies have to close their doors as well, putting additional thousands out of work.

In the past, our members have been willing to pick up portions of the increased utility rates, even though those costs are traceable to other sources. For example, until Amerigard/Harwood went out of business, uncollectible utility bills from industrial customers were unheard of. Yet we have been paying a portion of General Utilities' uncollectible bills for years. In addition, our members are large users, requiring far fewer miles of gas mains per volume used than residential customers. And our consumption doesn't shoot up at certain seasons of the year, so General Utilities doesn't have to overbuild gas storage facilities or maintain seasonal capabilities on our account as it does with retail and residential customers. Yet we have paid a large portion of these costs, too.

In short, even though we are among the utility's easiest to serve customers and have always paid our share and more, we are now being asked once again to put out more money for the sharp increases in uncollectibles, even though we are in serious financial shape. Clearly, we simply can't do it any more.

We urge this Commission, for once, to not ask our members to overpay. It forces them to raise prices and become uncompetitive with outsiders. We have been subsidizing residential and retail customers long enough. We need relief if we are to remain and grow in this community. If we don't get that relief, frankly, there is an excellent chance that both Camgren and Johnson/Fletcher will either go out of business, move to another region where the economic environment is more favorable or switch away from natural gas use to oil. If that happens, the retail and residential customers of General Utilities will have to pay all of the utility's fixed costs, and their rates surely will go up.

In conclusion, the uncollectible problem is almost totally a residential customer problem. Residential customers, therefore, should, for once, pay their full share for resolution of this problem.

Gantry Merchants Association Testimony

Ladies and gentlemen, thank you for this opportunity to testify in this hearing. My name is (insert your name here), and I represent the Gantry Merchants Association. We count among our membership most of the firms whose job is to help our community meet its needs for goods and services, including most of the retail stores in the area.

A great deal of fuss has been made about General Utilities' uncollectible bills. But at least General Utilities still has customers to bill. Because of the downturn in the economy, which retail stores always feel first, sales have been off by nearly 20 percent. This means that while the utility's rates and our costs are going up, our income is going down.

Furthermore, we also have significant increases in customers unable to pay their bills with us. So, as you can see, General Utilities is not the only one with bad debts. Coupled with the decline in business, the bad debts are making retail business very shaky in Gantry.

To prove the point, let me just stress that in the past year alone, five percent of our membership has gone out of business because of lagging sales. If that isn't proof of economic hardship, I don't know what is. So when you hear industry talk of going out of business, bear in mind that they are talking of one company, while we have dozens of failures to which we can point.

If anyone is spared from a utility rate increase, we fervently believe it should be the retail businesses of Gantry, on which this community relies so heavily for virtually all of its goods and services.

We recognize the plight of our fellow ratepayers, and feel they also should be spared from any rate increase. As business people, we have always had to handle our bad debts, and we feel the utility should be expected to do the same with their uncollectibles. We, therefore, urge this Commission to have the utility absorb its own bad debts, just as we have had to do, and cover the losses with reduced profitability or lower stock dividend payments to its shareholders. We must all grit our teeth and work to help Gantry make it through these tough times. . . and General Utilities should be no exception.

Commission Staff Testimony

Thank you, Commissioners and participants. I am (insert your name here) of the Commission staff, and I have some preliminary comments prepared by the staff, based upon the information we have gathered in the course of this rate case.

The Commission has already decided to grant a smaller rate increase to General Utilities Services Company than the utility requested. It is our recommendation that no additional financial burden be placed on the utility. You have just ruled that General Utilities qualifies for a six percent rate increase; to require them to absorb the cost of uncollectibles by reducing profitability would be to reduce the amount of revenues you have just ruled they deserve. Such an action would be contradictory to your own ruling.

As to who should pay the increased rates, it is our observation that this Commission has historically not served in the capacity of a molder of social change. That is, the Commission has not tried to redistribute wealth through the rate design mechanism. The Commission has viewed its role as the law requires—as an agency responsible for assuring reliable, cost-effective, quality utility service in this state. By law, this Commission must allow utilities to operate in a manner that permits them to earn a reasonable profit if they manage their business properly.

To this end, it is this staff's recommendation that the six percent increase—including all the uncollectible expenses—be spread evenly among all types of customers, with no special treatment for any particular group.

Sequence In A Rate Case

1. Utility Decides To File Rate Case.
2. Commission Studies Utility's Petition.
3. Interested Parties Become Involved In Process.
4. Commission Conducts Formal Rate Hearings.
5. Commission Issues Rate Order.

Worksheet #1 - Video Viewing Guide

Section A

1. Cite three types of utilities regulated by your state.

   a.

   b.

   c.

2. Name the two major responsibilities of a Public Services Commission.

   a.

   b.

Section B

1. Cite two of the three key elements involved in most rate cases.

   a.

   b.

2. Number the following rate case events in their proper order.

____ Hearings are conducted on the rate case.

____ New rates go into effect.

____ Utility files rate case petition.

____ Commission issues rate order.

____ Commission staff assigned to review the rate case.

____ Commission staff requests additional information from utility.

____ Examiner makes recommendations to full commission.

Section C

1. List the three key issues involved in the General Utilities rate case.

   a.

   b.

   c.

2. Name three groups which would be likely to testify at a rate case hearing.

   a.

   b.

   c.

Section D

1. Match the correct phrase on the right with its corresponding term on the left.

____ 1. test year

____ 2. rate design

____ 3. intervenors

____ 4. profit

____ 5. regulated monopoly

____ 6. examiner

____ 7. rate case

____ 8. commission

a. one who conducts rate case hearings

b. money earned by a utility based on the dollar value of its investment in property and equipment

c. authority which regulates utilities

d. allocation of the cost of service among types of customers

e. proceeding by which a utility seeks to change its rates

f. used as a basis in estimating future utility costs

g. request for clarification from commission staff

h. company operating under an exclusive franchise

i. groups which participate in rate hearing

Worksheet #2 - Student Handbook Study Guide

The following worksheet has been designed to help you use the **Student Handbook.** It is organized in an outline format and focuses on several key points in three important areas. Study the sections required and locate the correct answers. When you have found them, fill in the blanks on the outline.

I. Participants in a rate case.

A. The Utility - the agency _____ for an increase in rates.

B. The Regulatory Commission - the body responsible for assuring consumers of adequate and reliable service at _____ rates.

C. The Intervenors - groups which represent the three _____ of utility customers and other interested parties.

II. Procedures in a rate case.

A. Utility decides to file rate case.

1. Utility serves public notice of _____ _____.
2. Utility collects and _____ _____ test year data.
3. Utility files rate case petition.

B. Commission studies utility petition.

1. Commission assigns staff to review _____ _____.
2. Staff requests additional information from utility.

C. Interested parties become involved in process.

1. _____ groups and others request information from utility.
2. Interested groups request commission to be intervenors.

D. Commission conducts formal rate hearings.

1. Commission appoints _____ _____.
2. Groups present cases.
3. Examiner issues recommendations to full commission.

E. Commission issues _____ _____.

III. Glossary

A. APPEAL - request by any party in a rate case for _____ by the courts of a commission decision.

B. _____ - public meeting at which a utility, intervenors and the commission staff present their arguments on a proposed rate increase.

C. RATE BASE - amount of _____ _____ a utility has invested over the years in facilities that serve the customers.

D. RATE CASE - proceeding before a _____ _____ commission by which a utility seeks a change in the rates it charges its customers.

E. _____ - delay in putting a rate increase into effect until the commission can study and rule on it.

F. TRANSCRIPT - written record of a rate case _____ _____.

Worksheet #3 - "Who Said That?"

You are about to participate in a simulated rate case hearing. Several groups, including the Commission staff, will present testimony which expresses their points of view. Some will explain why they should receive special treatment; others will suggest why the remaining user groups should pay more in the new rate design.

The following quotations, or words similar to them, will reflect the positions of the groups. Identify these sentiments and write the name of the appropriate group in the space provided by each quote. Each of the five groups is responsible for two of the quotations. Be sure that you are prepared to explain why you matched the quotations with the corresponding groups. Remember, the groups are: **General Utilities Services Co., Gantry Consumer Federation, the Gantry Merchants Association, the Industrial Council of Gantry and the Commission staff.**

_____ 1. "We can't write off utility bills as an operating expense, so don't expect us to match business and industry dollar for dollar in accepting this burden."

_____ 2. "The economic health of a region is directly tied to the profitability of its industrial community."

_____ 3. "All of us have felt the pinch of economic hard times, so we recommend that all classes of customers share the rate increase equally."

_____ 4. "The utility has already paid its share in this case."

_____ 5. "Since it costs General Utilities less to supply us with every cubic foot of gas, we should pay less for every cubic foot."

_____ 6. "'Charging' the stockholders a portion of the rate increase is only going to hasten the time when another rate increase will be necessary."

_____ 7. "General Utilities isn't the only one hit with unpaid bills—we, too, have many uncollectible accounts among our customers."

_____ 8. "Although we pay the smallest dollar amount for these services, our utility bills make up a larger percentage of our budgets than any other use sector."

_____ 9. "We are concerned about the welfare of everyone here—the utility, business and industrial customers and the residential consumer."

_____ 10. "Every added expense not only costs us but all of the community which comes to us daily for goods and services."

Worksheet #4 - Commission Decision

Sitting as a Commissioner, you are now in a position to express your opinion. Your responsibility, as one member of the Commission, is to recommend a specific rate design, that is how much each type of customer will pay of the rate increase. To do this, you need to analyze the arguments, data and evidence submitted by the utility, the intervenors and your own staff. When all Commissioners have submitted a recommendation, a consensus will be determined and the rate design announced, along with the reasons for the decision.

Here are a few facts you need to remember as you consider the new rate design. General Utilities' current rate structure provides for residential customers to pay 45% of the total cost of service, commercial customers to pay 35% and industrial customers to pay 20%. You must determine if, and by how much, the current rate structure will be altered. In other words, if you think that the Gantry Merchants Association made a strong case for rate relief, you might choose to reduce the merchants' share from 35% to 30%. Of course, this means that the 5% removed from the merchants must be paid by the industrial and/or residential consumers.

Once you arrive at a decision, fill in the percentages on the chart below. Complete the worksheet by providing a rationale for your decision. In the spaces provided, and on extra paper if necessary, explain how and why you arrived at your rate design, noting your general observations and how you treated each type of customer, based upon the available data and testimony. Be as specific as possible in explaining your decision, citing all appropriate facts and figures.

General Utilities Services Company Rate Design

	Present % of cost of service	Recommended % of higher cost of service
Residential	45%	_____ %
Commercial	35%	_____ %
Industrial	20%	_____ %

GENERAL OBSERVATIONS:

RE: RESIDENTIAL:

RE: COMMERCIAL:

RE: INDUSTRIAL:

Unit Pre-Test

The following quiz is intended to see how much you know about utility ratemaking. It will not be graded, but will be used to help your teacher present a more informative unit.

MULTIPLE CHOICE:

____1. A regulated monopoly is a company which:
   a. Is granted an exclusive franchise to sell its product or service.
   b. Provides service in a specific geographic area.
   c. Is permitted rate increases only when they are approved by the state regulatory commission.
   d. All of the above.

____2. Which of the following is **not** true of a state regulatory commission?
   a. It must consider the financial health of the utilities it regulates.
   b. It must provide a guaranteed rate of profit to the utilities it regulates.
   c. It must assure consumers that they will receive reliable service at reasonable rates.

____3. State commissions regulate:
   a. Private utilities which supply electricity, natural gas, water and/or telephone service.
   b. Public utilities which supply electricity, natural gas, water and/or telephone service.
   c. Private and public utilities which supply electricity, natural gas, water and/or telephone service.

____4. Which of the following steps must be accomplished by a utility prior to filing a rate case petition?
   a. Meeting with the commission staff to gain preliminary ap proval of the case.
   b. Assembling test year data to support the requested rate increase.
   c. Increasing rates to consumers to test their reaction to the proposed increase.
   d. Supplying all potential intervenors with financial documentation of need for the proposed increase.

____5. Which of the following is **not** an issue to be determined in a rate case?
   a. What profit will the utility be allowed?
   b. Were the operating expenses claimed by the utility reasonable?
   c. How much should the utility be allowed to "mark up" fuel costs?
   d. How much should each type of customers pay of the increased rates?

MATCHING: Place the letter of the correct definition in the right-hand column in the space provided by the corresponding term in the left-hand column.

____ 1. types of customers
____ 2. commission
____ 3. intervenors
____ 4. operating costs
____ 5. test year
____ 6. regulated monopoly

a. expenses incurred by a utility in providing its product or service
b. state authority, charged with regulating public utilities
c. company authorized to provide service in a specific geographic area
d. residential, commercial and industrial groups which purchase a utility's product or service
e. allocation of the cost of service within a utility's types of customers
f. consumer or other interested groups who participate, with a commission's permission, in rate case hearings
g. basis in estimating future utility costs in a rate case

Unit Post-Test

The following quiz is intended to see how much you learned about utility ratemaking. It will not be graded, but will be used to help your teacher assess the effectiveness of the unit.

MULTIPLE CHOICE:

____1. A regulated monopoly is a company which:
   a. Provides service in a specific geographic area.
   b. Is permitted rate increases only when they are approved by the state regulatory commission.
   c. Is granted an exclusive franchise to sell its product or service.
   d. All of the above.

____2. Which of the following is **not** true of a state regulatory commission?
   a. It must assure consumers that they will receive reliable service at reasonable rates.
   b. It must consider the financial health of the utilities it regulates.
   c. It must provide a guaranteed rate of profit to the utilities it regulates.

____3. State commissions regulate:
   a. Private utilities which supply electricity, natural gas, water and/or telephone service.
   b. Private and public utilities which supply electricity, natural gas, water and/or telephone service.
   c. Public utilities which supply electricity, natural gas, water and/or telephone service.

____4. Which of the following steps must be accomplished by a utility prior to filing a rate case petition?
   a. Assembling test year data to support the requested rate increase.
   b. Increasing rates to consumers to test their reaction to the proposed increase.
   c. Supplying all potential intervenors with financial documentation of need for the proposed increase.
   d. Meeting with the commission staff to gain preliminary approval of the case.

____5. Which of the following is **not** an issue to be determined in a rate case?
   a. How much should each type of customers pay of the increased rates?
   b. What profit will the utilitiy by allowed?
   c. Were the operating expenses claimed by the utility reasonable?
   d. How much should the utility be allowed to "mark up" fuel costs?

MATCHING: Place the letter of the correct definition in the right-hand column in the space provided by the corresponding term in the left-hand column.

____ 1. regulated monopoly
____ 2. intervenors
____ 3. commission
____ 4. test year
____ 5. operating costs
____ 6. types of customers

a. expenses incurred by a utility in providing its product or service
b. state authority, charged with regulating public utilities
c. company authorized to provide service in a specific geographic area
d. residential, commercial and industrial groups which purchase a utility's product or service
e. allocation of the cost of service within a utility's types of customers
f. consumer or other interested groups who participate, with a commission's permission, in rate case hearings
g. basis in estimating future utility costs in a rate case

The five-day version of this unit is intended to serve a dual purpose. It has been designed as a simulation activity for the classroom. This version differs from the three-day format in that instead of reading a prepared script, a technique used to save time, each group in the five-day unit prepares its own testimony based on the role data sheets. In so doing, the students gain the opportunity to role play with much more creativity and the end result is much more personalized.

The five-day format may be implemented another way, as a one full day activity. This option may be utilized with students in a classroom, if scheduling permits, or with an adult group, such as a utility staff or an interested citizens' group. Hence, this section has been labeled a Facilitator's Guide. Whichever the case, by intensifying the experience into a single day, the dynamics of the simulation are such that the excitement of the role playing is compounded.

Activity Notes

The following activity notes have been designed for implementation over five separate days. If the one day option is utilized, adequate time must be provided between each daily segment for the participants to do the homework. It works especially well to spread the simulation research over a lunch break, with the background work and simulation preparation in the morning and the rate case hearing in the afternoon.

Day One

1. You may wish to begin the unit by administering the optional pre-test. This test may be reproduced from page 20 of this guide; the answers are provided on page 8.
2. Introduce the subject of utility ratemaking and relate it to the current Course of Study as appropriate. You might use a motivating device or event to initiate the study, e.g., showing and discussing an actual utility bill, or having a guest speaker from the P.U.C. or a local utility. Another possibility is to give the pre-test (if it is used) on one day and have the students interview their parents on the ratemaking process that evening before beginning the unit on the next day.
3. Continue the lesson by discussing how everyone is affected by utility services and the price we pay for these services. Note the section, "Teacher Background Material," found on page 4 of the unit introduction. Additional supplementary information is available in the booklet, **New Guide to Utility Ratemaking,** included in this kit.
4. Hand out the **Student Handbooks.** Note that this publication contains:
   a. Introduction to "The Balancing Act" video, page 3.
   b. Description of the participants and procedures in a rate case, pages 4-8. In introducing the procedures in a rate case, it is best to turn to pages 6-8 of the **Student Handbook** and actually walk the students through the chart, noting the chronological sequence of events and the division of activities between the four groups noted.
   c. Scenario of a typical rate case, page 9.
   d. Unit glossary, pages 10-13. Note: Due to the specialized nature of the unit's content, it is critical that the students study and learn the ratemaking terminology. Hence, the glossary is very important. In fact, it might be necessary to spend some extra time throughout the activities discussing new vocabulary and what these terms mean in the context of the subject matter.
5. Have the students read "Introduction to 'The Balancing Act' Video."
6. Hand out and assign "Worksheet #1 - Video Viewing Guide." Note: Sections A, B and C should be completed as the video is shown. Section D should be completed after viewing the video.
7. Show the videotape as a basic introduction to the unit. Due to the heavy content load, it is recommended that the video be shown in three segments as defined below.
   a. This section deals with the **rationale of rate regulation** - the types of utilities regulated; why utility rates are regulated; why competing systems are financially impractical; why government's regulation is important; commonalities among approaches of all states. Have the students complete Section A of "Worksheet #1..." while viewing the section. Stop the video at the end of Betty Rankin's statement which concludes: "This profit is based only on the dollar value of the investment the utility has made in its property and equipment, not on the cost of the fuel—the natural gas, coal or oil it purchases to serve its customers, nor on the wages or salaries it pays its employees." The screen will be showing the graphic, "RESPONSIBILITIES OF REGULATORY COMMISSIONS. . ." Once the video has been stopped, discuss the students' answers in Section A of "Worksheet #1..." and the concepts presented. (Answers to the worksheet are provided on page 8 of this guide.)
   b. This section discusses **how rates are set** - major components of a typical utility rate: operation expenses, utility investment, profit and rate design, and their composition; and **ratemaking procedures** - steps involved in the rate case process. Have the students complete Section B of the worksheet while viewing the section. Stop the video at the end of Betty Rankin's statement which concludes: "Next comes testimony from the commission staff, utility customers and other interested groups, called 'intervenors.' They, in turn, cross-examine each other and the utility." The screen will be showing the graphic, "REVIEWING UTILITY RATES..." Once the video has been stopped, discuss the students' answers in Section B of "Worksheet #1..." and the concepts presented. It is important to note the difference between **making a profit possible** and **guaranteeing a profit.** The commission must make it possible for the utility to make a profit; however, it does not guarantee one. Use the "Sequence in a Rate Case" repro sheet (found on page 15 of this guide) to highlight the major steps in the ratemeking process. Note any variations present in your state which differ from those described in this unit.
   c. This section deals with **rate case arguments** -typical types of groups testifying at rate hearings: utility, residential consumers, retail merchants, industry, and commission staff. Have the students complete Section C of the worksheet while they veiw this section. Once the video has been completely shown, discuss the students' answers in Section C of "Worksheet #1..."

8. Assign the following homework:
   a. Complete "Worksheet #1 - Video Viewing Guide," Section D.
   b. Read "Participants in a Rate Case" and "Procedures in a Rate Case," pages 4-8 of the **Student Handbook.**
   c. Have the students check local newspapers for articles on utility rates. These should be brought to class tomorrow for sharing.

Day Two

1. Discuss the students' answers to "Worksheet #1. . ." (Answers to the worksheet are provided on page 8 of this guide.) Given the emphasis of Section D, this is a good time to review other unit vocabulary, too.
2. Have the students share any of the utility rate articles they found in the newspaper. Note what significance they see in this news.
3. Divide the class into small groups of three-four students each.
4. Hand out and assign "Worksheet #2 - Student Handbook Study Guide" to be completed by the groups or by individual students
5. Once the class has completed the worksheet, discuss the answers. (Answers are found on page 8.)
6. Reconfigure the students into five groups. Assign one of the following simulation roles to each group: utility, commission staff, consumers, industry, retail merchants.
7. Hand out the simulation data sheets. These data sheets are to be reproduced from pages 24-28.
8. Have the groups study their data sheets and begin preparation for their testimony at the rate case hearing. Note: They may obtain any supplementary data from whatever sources they can find, including the booklet, **New Guide to Utility Ratemaking.**

Day Three

1. Discuss any questions the students have regarding the simulation scenario or their respective roles.
2. Continue rate case hearing simulation preparation.

Day Four

1. Hand out and assign "Worksheet #3 - Who Said That?" to be done during the rate case hearing simulation. Point out to the students that this activity requires them to exercise some analytical skills. Their answers must reflect an understanding of what a particular group might have said. And where two groups may be responsible for the same statement, a process of elimination, using the remaining quotations, might be necessary.
2. Conduct the rate case hearing simulation as follows:
   a. Have a spokesperson(s) for each group present the group's testimony. Begin with the presentation of the utility, followed by the consumer group, the industry group, the retail merchants group and conclude with the commission staff representative. Each presentation should take 8-10 minutes.
   b. Make sure that the students listen carefully to each presentation and complete the answers required on "Worksheet #3. . ."
3. Once the testimonies have been completed, discuss the student answers to "Worksheet #3. . ." (Answers are found on page 9.) Be sure that they explain how they arrived at their conclusions, based on the available data and documentation.

Day Five

1. Hand out "Worksheet #4 - Commission Decision."
2. Have the students, now acting as commissioners, make a decision on the new rate design and complete "Worksheet #4. . ." Note that they are required to provide justification on their decision. Students may use "Worksheet #3. . ." in completing "Worksheet #4. . ." Since the change of roles may be confusing to some students, be sure that they understand their new position as a commissioner before they begin to complete the worksheet. Emphasize that, as in this situation, commissioners frequently are former consumer group spokespersons, business people, academics or civil leaders.
3. Discuss the students' conclusions on "Worksheet #4. . ." You may wish to average the students' percentages to calculate a consensus rate design.
4. Conduct the simulation debriefing. (A debriefing guide is provided on page 29.)
5. Conclude the unit by answering any remaining student questions.
6. (Optional) Administer the post-test. This test may be reproduced from page 21 of this guide; the answers are found on page 8.

Data Sheet - General Utilities Services Company

The General Utilities Services Company has been providing natural gas service to Gantry for 63 years and considers itself well-regarded in the region. The company proudly claims a good record in providing reliable service and reasonable rates over the years.

General's management is cautious and conservative. The firm has paid a regular dividend to its stockholders for 43 years and has a good bond rating.

Pertinent Facts

- General's 6% rate increase, which will go into effect in less than two months, is below the 8% they asked for.
- The last time General Utilities was granted a rate increase was three years ago.
- General has experienced a significant increase in uncollectible bills over the past year—climbing up to $4 million, three-times normal.
- General's figures showed steadily increasing operation expenses, including a 5% pay raise for all unionized employees.
- General asked that its approved rate of return on its rate base remain at 14%, as set by the PUC three years ago.

Key Arguments

- General proposed in its rate case that all types of customers pay the same percentage increase in their rates, contending that this is the fairest way, under the circumstances.
- General pointed out that its stockholders are mostly residents of Gantry, many of whom are older citizens, who cannot afford to have a reduction in the dividends for their stock which a reduction in profitability might prompt.

Data Sheet - Gantry Consumer Federation

The Gantry Consumer Federation is made up of several thousand private citizens who have joined the group in an effort to fight for more effective consumer protection at the local level. While the group's main thrust is to eliminate fraudulent or misleading business practices, it also takes an aggressive role in opposing what it views to be unfair price increases by established businesses, including utilities.

The Federation recently celebrated its 10th anniversary and announced a doubling of membership in the past two years. Members of the group are from all sectors of life in Gantry, with large representations by retired people on fixed incomes, college-age activists, and middle-income "consumerists" who have grown wary of what they consider unethical business practices.

Pertinent Facts

- The Federation is very alarmed at the downturn in the local economy, particularly the current unemployment rate of 10%.
- The Federation challenged many of General Utilities' arguments in the rate case, including many items the utility claimed as expenses, the method of calculating the rate base, and the size of the rate of return on the rate base.
- Stock in General Utilities has gone up $4 (from $27 to $31) in the past three years, and the Federation views this relative prosperity in a time of economic uncertainty in Gantry as unjustifiable. The group fought for a reduction in the utility's profit, and for a rate increase of 3.8 percent, rather than the six percent granted.

Key Arguments

- The Federation believes that the high rate of uncollectible utility bills from residential customers is proof that their group is the least able to cope with a general rate increase.
- The Federation points out that business and industry can write their higher utility rates off of their taxes, thus making an across-the-board rate increase, in fact, a greater burden for residential customers than for businesses. For example, if a company pays $10,000 for gas in a year, it can subtract the $10,000 from the amount on which it pays corporate income taxes, thus saving several thousand dollars in federal and state taxes. Residential customers have no such tax deduction on gas bills.
- The Federation believes the reason the Gantry economy is bad is because of mismanagement by some industries which lost business by failing to remain competitive. The group contends that the higher rates should be paid by the industries who "brought about this disaster."
- Since the start of the economic downturn, unemployment in Gantry has more than doubled, and welfare rolls have grown by 38%. These people can ill-afford even higher prices for such an essential commodity as utility service.

Data Sheet - Industrial Council of Gantry

The Industrial Council of Gantry is composed of a comparatively small group of large employers, most of whom are manufacturers of goods. While the member companies are small in number, they are important to the community because they provide the payrolls for one out of every five families in the area.

The Council's main role is to promote and protect industry's economic interests within the community as well as in the state capital. The Industrial Council of Gantry is an aggressive organization, controlled by young leaders who have been given control by older members over the last five years. These "young Turks" have put considerable time and energy into cultivating a positive relationship with the community through newspaper advertising and sponsorship of youth activities and cultural events. The group has also encouraged outside industries to locate facilities in Gantry, without much success to date.

Pertinent Facts

- One major company went out business in the past year, causing a 4.8% increase in unemployment in Gantry.
- Two other companies, in the same business, have laid off 3100 employees, adding 3% more to the unemployment roles, pushing the unemployment rate up to 10%.
- The members of the Industrial Council buy 32% of the gas sold by General Utilities Services Co.

Key Arguments

- The Council contends that, historically, industries have not been given the lower rates they deserve. Less work and expense are required of the utility to serve such industries compared to a residential customer. In terms of bill handling, miles of pipeline required per volume of gas sold, and winter demand peaks brought about by home heating, the residential customer is more expensive to serve. For example, one industrial customer may require only one gas main and one meter, while hundreds of meters and many more miles of gas mains may be needed to serve residential customers using the same volume of gas as the one industrial customer.
- The Council claims its members have a much better history of paying utility bills than other types of customers, and thus have not significantly contributed to the utility company's financial problems. In particular, until one company went bankrupt, industrial uncollectibles had been almost non-existent. Yet industry had been required to pay a large share of the uncollectible bills—most of which were caused by residential customers.
- The Council contends that an increase in utility rates will force its members to raise prices, making them less competitive with firms from other areas. In fact, the Council has suggested that if rates go up, more industrial firms could either go out of business, move to another region where utility costs are much lower or satisfy their energy needs with oil rather than natural gas. In any of these cases, the commercial and residential customers of General Utilities will then have to pay all of the utility's fixed costs.

Data Sheet - Gantry Merchants Association

The Gantry Merchants Association has a membership of several thousand businesses ranging from insurance to insulation and incubators—most of the retail businesses in Gantry belong to the Association, which employs more than 35 percent of Gantry's work force.

The Association is responsible for promoting a good business climate for its members, which means fighting against unfavorable local ordinances, zoning changes and traffic plans. Now in its 75th year of existence, the Association has the respect of community leaders because it speaks out on local issues.

Pertinent Facts

- Sales in Gantry stores and service businesses have fallen off by nearly 20% in the past year, largely because of high unemployment. Members reported annual sales of $684 million, compared to $821 million for the previous year.
- Association members report their uncollected billings have climbed from 1.7% up to 3.2% over the past 12 months, resulting in a cash shortfall of $16 million for the members.
- In the past year, business failures in Gantry have increased by 5%, indicating an unhealthy business climate.
- 5% of the people employed by Association members have been laid off in the past year due to slumping sales.
- If industrial layoffs increase, retail sales will slump even more.
- If residential customers pay more for utility services, they will have less money to spend on retail purchases.

Key Arguments

- The Gantry Merchants Association contends that while sales are going down, costs are going up, and it can't afford to get caught in a worse squeeze by having utility rates get higher. Furthermore, bad debts (uncollectibles) owed to Association members are going up, and cutting profits even more.

Data Sheet - Public Utilities Commission Staff

The Public Utilities Commission is charged by law with assuring that the public gets reliable, reasonably priced utility service, and that utility companies be allowed to earn a fair return on their investments. The Commission's staff is dominated by under-40 college graduates with expertise in law, economics, business and statistics.

The staff's inclination is to carefully pursue and document the facts in a rate case so that the Commission's decision is made with the best available information. Accuracy is a high priority with this dedicated group.

Pertinent Facts

- The Commission and staff spend 5 to 11 months in reviewing a rate case before the Commissioners reach their finding.
- The new rate increase is expected to become effective in less than two months.
- The staff questioned whether the test year was representative of what the conditions would be when the rate becomes effective. There are signs that the recession has bottomed out and sales in Gantry may be up in the near future.
- The staff felt that General's expenses may have been unduly high, due to a 5% pay hike recently negotiated with the utility's union employees.
- The staff questioned whether an authorized 14% rate of return was justified, in light of the recent depressed state of the economy.

Key Arguments

- In the last rate proceeding three years ago, the Commission had already taken under careful consideration the allocation of costs among customers; thus, present rates should be adjusted equally.
- The staff said that the Commission's role historically was not one of molding social change, and that attitude should prevail—the rate increase should be the same for all types of customers.
- The staff believes rates based on across-the-board increases would be fair and not discriminate against any of the customers.

Simulation Debriefing

The debriefing session of **The Balancing Act** unit is an extremely important part of the activity. It is in the debriefing that students are able to express their opinions of the unit—its content and format—and the teacher can assess how effectively the activity served as a learning experience. In short, debriefing allows the teacher, and the students, to evaluate whether the unit was a success or failure, and why.

Debriefing involves reflection and discussion. In order to give some direction to the debriefing process, consider some of the following questions:

1. Summarize the major events in the ratemaking process from the utility's notice of intent to file a rate increase petition to the final rate order by the Commission.
2. To what degree did the intervenors successfully present their respective cases? How might each have strengthened its arguments to the Commission?
3. How well did the Commission staff serve to balance the needs of General Utilities with those of the general public?
4. How well did the Commissioners do their job in this case? How could their task be made easier?
5. To what degree do you think that regulated monopolies are necessary and/or desirable in our society? Why?
6. How important is it for citizens to understand the utility ratemaking process? Why?
7. How can public appreciation and knowledge of the complicated ratemaking process be increased?
8. What was the most important thing you learned from this unit?

In addition to a teacher-initiated discussion, you might want to consider two debriefing alternatives. Suggested questions might be handed out the day before the debriefing is scheduled. This will permit the students to consider their opinions and answers more carefully. Or small groups of students (4-6) can write a consensus critique of the activity and then share it with the rest of the class.

Needless to say, debriefing strategies should be modified at the discretion of the teacher to meet the needs of particular circumstances.

One final note, the educational impact of this unit can be heightened considerably by a presentation from a guest speaker. Bringing a Commissioner, Commission staff member, utility executive or an intervenor into the classroom makes the whole process a much more real experience for the students. Such a speaker can offer first-hand observations and anecdotes which will breathe life into this study of utility ratemaking.

Suggested Unit Expansion Activities

1. Conduct a student debate on consumers vs. utility real or perceived interests in the General Utilities rate case.
2. Have the students research a local rate case, using the newspaper "morgue" to gather data. They might also interview key utility personnel and/or participating intervenors.
3. Have the students interview their parents or guardians prior to the unit to assess the attitudes/ideas of adults about public utility ratemaking.
4. Have the students research how rates are set by a utility **not** regulated by a Public Utilities Commission.
5. Compare the increase in utility rates over the past 10 years with the rise in the cost of living.
6. Prepare a program for presentation at a school or community meeting, explaining how utilities are regulated and rates are determined.
7. Have the students research other state regulatory agencies and how they operate. Compare the responsibilities and operating procedures of these agencies with a Public Utilities Commission.
8. Have the students research how various consumer groups are represented in the rate case process.

ADDITIONAL ACTIVITIES NOTES

Bibliography

"Costing and Pricing for Old and New Customers." Hanke, Steve H. and John T. Wenders. **Public Utilities Fortnightly.** April 29, 1982, 109:43-47.

"The Effectiveness of Price Regulation." Meyer, Robert A. and Leland E. Hayne. **Review of Economics and Statistics.** November, 1980. Vol. 62, p. 555(12).

"Energy Conservation Curriculum for Secondary and Post Secondary Students, Module 3: Understanding Utility Bills." Navarro College, Corsicana, TX. Sponsoring agency: Texas Education Agency, Austin. April, 1979, 67 pages.

This module is designed for use by itself or as part of a sequence of four modules on understanding utilities (see also modules 5-7). The objective of this module is to introduce the student to utility bills used for residential and commercial customers. First, an introduction to the module and definitions of key terms are provided. Next, the text is presented in the following five units: (1) electric meters; (2) electric rates; (3) the electric bill; (4) gas meters and gas rates; and (5) the gas bill. The information in each unit is presented in lecture format accompanied by laboratory exercises and questions/examples for class discussion. A bibliography and several charts illustrating the text material are found at the end of the module.

"Enernomics." Produced and distributed by Innovative Communications, Inc., Pleasant Hill, CA. 1983.

This secondary-level teaching unit combines an introduction of economics concepts with a problem solving focus on the home energy budget and the energy utility bill. It is designed with four optional implementation formats which accommodate a variety of teaching styles and students' needs. Unit contains a two-part filmstrip, 40 copies of various student pieces and a comprehensive teaching guide.

"Idealism and Realism: An Institutionalist View of Corporate Power in the Regulated Utilities." Schwartz, David S. **Journal of Economic Issues.** June, 1985, 19:311-331.

"'Lifeline' Utility Rates: A Selected Bibliography." White, Anthony G. December, 1980, Public Administration Series, Bibliography No. P-629.

"Local Government Revenues: Part 1, Franchises—A Selected Bibliography." White, Anthony G. March, 1978. Exchange Bibliography No. 1478.

"Utility Regulation: Regulatory Lag; A Selected Bibliography." White, Anthony G. September, 1980. Public Administration Series, Bibliography No. P-566.

Lag between time when a utility proposes a rate increase and when it is granted.

"Why Utility Customers Don't Pay Their Bills." Kiefer, Michael and Ronald Grosse. **Public Utilities Fortnightly.** June 21, 1984, 113:41-44.

Report on survey of 1700 Wisconsin Public Service customers, conducted June, 1983.

Teacher's Notes

PRESENTED AS AN EDUCATIONAL SERVICE BY

1515 Wilson Boulevard, Arlington, VA 22209

Reviewed and endorsed by:
National Association of Regulatory Utility Commissioners
Consumer Federation of America
American Gas Association Education Advisory Council

Created By Innovative Communications, Pleasant Hill, CA 94523

THE BALANCING ACT

How Utility Rates Are Decided

1987 American Gas Association

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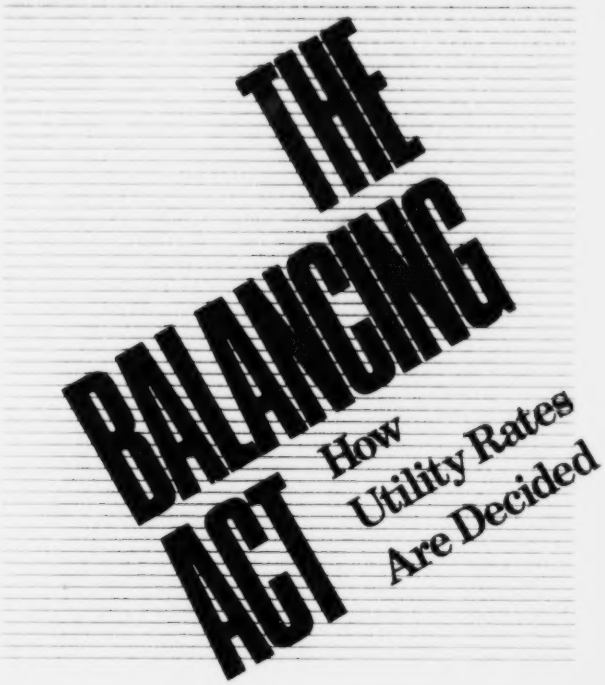

Table of Contents

Introduction to "The Balancing Act" Video 3
Participants in a Rate Case 4-5
Procedures in a Rate Case 6-8
Rate Case Simulation Scenario 9
Glossary 10-13

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Introduction to "Balancing Act" Video

Why a Videotape?

The videotape in **The Balancing Act** is designed to help you get an understanding of how and why utility rates are set, the definitions of some important terms you may have heard in news reports, and how utility ratemaking affects you directly. It is based on a typical utility ratemaking proceeding, presented to a public utilities commission by the General Utilities Services Company.

What Should You Watch For?

There are several things to watch for in the tape, which will help you understand the ratemaking process. Understanding these things also will help you with the rest of the activities, including deciding how much of the new rate increase each customer group must pay.

KEY ISSUES: You'll see a news story and learn about the process involved in General Utilities' request for an increase in the rate they charge for natural gas service. There are certain issues that you need to understand in order to learn how and why utility rates are set. The four key issues are:

Utility Investment in Property and Equipment

Treatment of Utility Expenses

Utility Profit

Rate Design (allocation of costs)

RATE TALK: Some other terms covered in the tape also are important to know. These include the **commission, regulated monopolies, intervenors, test year, examiner and rate case.**

SEQUENCE OF EVENTS: Watch for the sequence of events involved in the ratemaking process. These are the heart of what a rate case is all about.

PARTICIPANTS: There are five key parties in the General Utilities rate hearing scenario, and they represent those typically involved—see if you can identify them.

OTHER CONCERNS: You'll get some other information that will be useful to your understanding of the parties' points and how they function. These include:

Responsibilities of regulatory commissions;
Types of regulated utilities;
Types of customers and their interests.

Since the videotape is an introduction to activities you'll be doing later in this mini-course, you should pay close attention to the statements of each of the participants, and the role of each in the overall picture.

You'll find plenty of information in this "mini-documentary"; use it well. For terms you do not understand, refer to the glossary in this handbook.

Participants in a Rate Case

There are three basic groups (or parties) in a rate case: **the Utility, the Regulatory Commission** and **the Intervenors.** Each plays a specific role in the process by which utility rates are set.

The Utility: This is the company applying for the increase in rates. Utilities include both publicly owned and private companies (generally owned by stockholders) which provide such services as natural gas, electricity, telephones and water. Some utilities are municipally owned and operated. And some electric and telephone utilities in rural areas are owned cooperatively by the member/users. The major difference between private and municipal utilities is that a private company sells bonds (debt) and stock to pay for its property and facilities. Thus, the owners of the stock (the stockholders) are the owners of the business. Funding of municipal utilities comes from the sale of bonds; no stock is issued and the government owns the utility. In most cases, municipal and cooperative utilities are not subject to the rate jurisdiction of the state regulatory commission.

A utility's role in a rate case is to provide data supporting its petition to change rates (either up or down) from existing levels for its services. The utility has the burden to prove the need for the change. Utility personnel who become involved in rate cases usually include accountants, attorneys, specialists in rates and top executives. For many of them, participating in the utility ratemaking process is a full-time job, involving tracking and recording costs of providing services to various types of customers.

The Regulatory Commission: This is the publicly selected body whose job is to insure that consumers receive adequate and reliable utility service at reasonable rates. To be able to provide reliable service, the approved rates must give the utility the opportunity to earn a fair profit on its prudent investments. This enables the utility to continue to raise the money needed for new facilities or replacement. At the same time, the commission requires the utility to operate its business in an efficient and reasonable manner.

The commission usually operates on a statewide basis, regulating the rates of all investor owned utility companies within that state. Its jurisdiction, power and duties are all spelled out in laws passed by the state legislature. A small group of individuals, known as commissioners, usually makes the final decisions in rate cases. These people usually are appointed by officials, such as the governor. In some states they are elected by voters. Assisting the commissioners is the commission staff, made up of experts on water, gas, electric and telephone utility operations. Staff participates in rate proceedings, often giving testimony and making recommendations. In a utility rate case, a commission examiner or a commission staff member is the hearing officer; that person's job is to conduct the hearings and make final recommendations to the commissioners, based on all the testimony presented at the hearing.

The Intervenors: There are three basic groups of intervenors who participate in most utility rate cases. They represent the three major types of utility customers—residential, industrial and commercial. The job of each is to represent the interests of the members of their particular group in rate cases, with the aim of minimizing the impact of any rate changes on that group. Residential groups, therefore, strive to keep utility rates down for their members by various means, including a design of rates in which charges are lower, for example, for the first several therms of natural gas or kilowatt hours of electricity used by residential customers. Industrial intervenors generally argue in favor of what is known as a block or declining rate structure, in which the price per unit of utility service is reduced as use increases. Commercial groups are made up of retail and service-oriented businesses, and often real estate developers. This type of organization also seeks favorable rates for their businesses. Other types of special interest groups may also become intervenors, such as environmentalists, senior citizens or minorities which feel a need for particular consideration in the setting of rates.

In many states there are consumer advocates, representatives of the state attorney general's office or councils legally appointed or approved to represent the interests of consumers and participate in utility rate cases.

An Important Fact

There is an old saying—"There's no such thing as a free lunch. Someone, somewhere, has to pay." This is an important point that must always be kept in mind in understanding any business decision. . . including utility ratemaking. Providing safe and reliable service costs money. If a utility incurs an expense, someone—the residential customer, the commercial customer, the industrial customer or the utility stockholder—must pay that expense. Who eventually pays, in turn, has long-term effects. If residential customers pay too much, that is unfair. If the commercial customers pay too much, they pass these costs along to the consumers of their goods or services. If industrial customers pay too much, they may go out of business or move to another state. And if the stockholders do not get a fair return on their investment, the utility could become financially unstable, and have to raise its rates to cover increased financing costs.

The objective of utility ratemaking, therefore, is to be fair and reasonable to all parties involved. How to do that is the real challenge for the regulators. This "Balancing Act" is the subject of this unit.

Procedures in a Rate Case

A clear cut sequence of events is followed when a utility seeks commission approval for a rate increase. While the procedures may vary somewhat from state to state, the table below describes the steps that are followed in most cases. (NOTE: For the sake of clarity, the tasks of the commissioners and the commission staff have been identified separately.) To follow the sequence, read the chart from top to bottom.

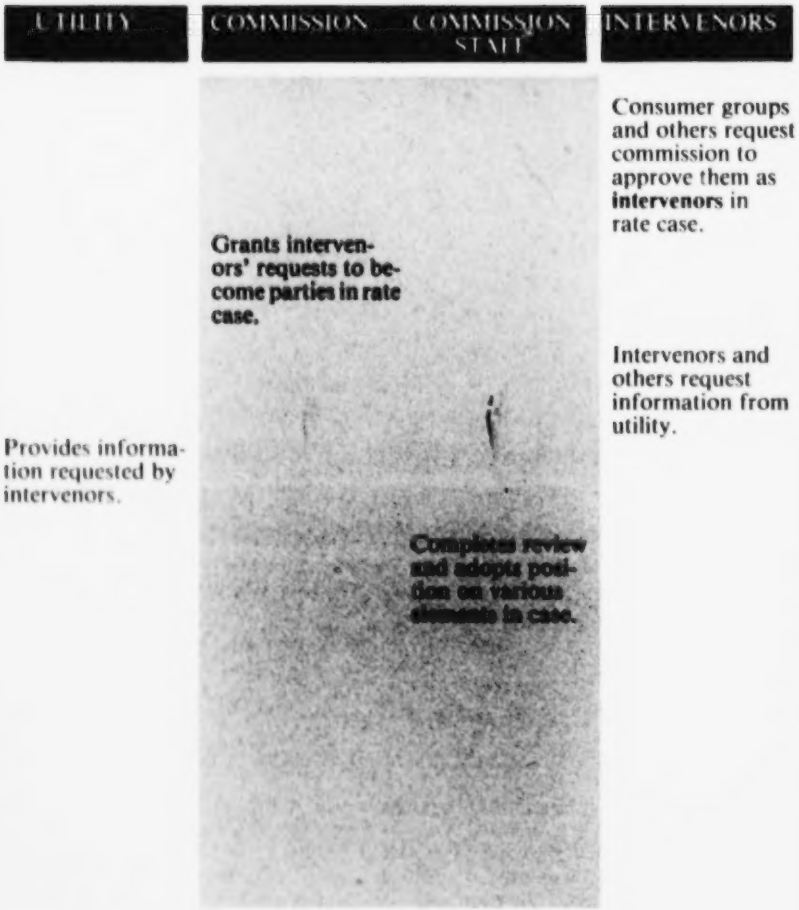
1. Utility decides to file **rate case.**

UTILITY	COMMISSION	COMMISSION STAFF	INTERVENORS
Serves public notice of intent. Collects and adjusts **test year** data. Files rate case petition with supporting data.			

2. Commission studies utility petition.

UTILITY	COMMISSION	COMMISSION STAFF	INTERVENORS
Provides additional data, as requested.	Normally orders suspension until rate case has been studied and determined.	Assigns staff to review petition. Studies data submitted by utility. Requests additional information from utility.	

3. Interested parties become involved in process.


UTILITY
COMMISSION
COMMISSION STAFF
INTERVENORS
Consumer groups and others request commission to approve them as **intervenors** in rate case.
Grants intervenors' requests to become parties in rate case.
Intervenors and others request information from utility.
Provides information requested by intervenors.
Completes review and adopts position on various elements in case.

4. Commission conducts formal rate hearings.

UTILITY	COMMISSION	COMMISSION STAFF	INTERVENORS
		Examiner or commissioners conduct hearings.	
Presents data and documentation.			
		Presents position on filing.	
			Present witnesses who file supporting data or express opinions.
Cross-examines other presenters.			Cross-examine other presenters.
Files **exceptions** to examiner's recommendations.			File **exceptions** to examiner's recommendations.

5. Commission issues rate order.

UTILITY	COMMISSION	COMMISSION STAFF	INTERVENORS
	Reviews case transcript, including exceptions. Issues **rate order.**		
May request **rehearing** and/or may appeal commission decision to the courts.			May request **rehearing** and/or may appeal commission decision to the courts.
New rates go into effect.			

NOTE: The steps outlined above are the major points of action. Other, more technical steps often are included. One such example is the commission allowing interim or emergency rate increases, when justified, prior to a final ruling. Another example is the calling of additional hearings in front of the entire commission—after hearings by the examiner—to clarify points of dispute.

Rate Case Scenario

The focus of the activity in **The Balancing Act** is a scheduled 6% increase in the rates the General Utilities Services Company is charging its customers for natural gas. The rate increase will raise the company's revenues from gas sales by $12 million per year—from $199 million to $211 million. The utility already has been granted the increase by the Public Utilities Commission (P.U.C.), but now a decision has to be made by the Commission as to what portion of the increase each group of customers should pay.

The area served by General Utilities is known as Gantry, and the three intervenor groups actively involved in this rate case are the Gantry Merchants Association, the Gantry Consumer Federation and the Industrial Council of Gantry. Each group opposed the size of the rate increase originally sought by the utility, and succeeded in convincing the Public Utilities Commission to reduce the amount of the increase by two percent—from the eight percent requested by the utility down to the six percent approved by the P.U.C.

General Utilities has proposed spreading the increase evenly among all three types of customers. Such action by the Commission, called a "Rate Design", would maintain the current rates in which residential customers pay 45% of the total costs of service, commercial customers pay 35% and industrial customers pay 20%. The P.U.C. has agreed to these differences in the past because it was shown that it costs more to serve residential customers than commercial and industrial ones, and more to serve commercial users than industrial customers. But each of the three customer groups is now competing against the others. Their goal is to reduce their own overall percentage and minimize the impact of the rate increase on their particular group.

One of the reasons which General Utilities cited in asking for the higher rates was a large increase in the number of customers who couldn't or wouldn't pay their bills. Of the $4 million in "uncollectibles," almost $400,000 was owed by an industrial customer which went bankrupt. Another $800,000 was owed by other businesses—mostly retail—and the balance, amounting to $2.8 million, was owed by delinquent residential customers.

Because utility services are essential to the health and safety of most customers, many regulatory commissions place restrictions on cutting off service, despite failure to pay utility bills. Such restrictions are quite common for the cold winter months when discontinuance of gas or electric service might endanger the health, even the life, of customers.

These uncollectibles are about three times as high as usual, due to a depressed local economy. There were three industrial plants in the area, all in the same business. In addition to the one that went out of business, a lack of demand for their product has resulted in seriously slumping sales by the other two. As a result, many people have been laid off.

Consequently, many families in Gantry are experiencing serious financial problems. Even local stores are reporting sales down—by nearly 20%. Each group feels it is already paying its fair share of the utility bills, and is urging the Public Utilities Commission to put the increase on other groups, or to reconsider the rate increase it has granted to General Utilities.

Rate Case Glossary

ADJUSTMENTS - changes made in calculating a utility's test year costs to reflect constant expenses for the future.

ALLOCATION OF COSTS OF SERVICE - determination of how much each type of a utility's customers will pay for their service.

ANNUALIZED COSTS - costs which are adjusted to reflect increases in such costs during the test year for a full 12-month period.

APPEAL - request by any party in a rate case for reconsideration by the courts of a commission decision.

BRIEFS - written arguments submitted to a commission by the parties in a rate case.

COMMISSION - state authority, charged with regulating public utilities; may be called a Public Service Commission, Public Utilities Commission or a Corporation Commission.

CONSTRUCTION WORK IN PROGRESS (CWIP) - money spent building new facilities prior to their completion.

COST OF SERVICE - total dollars required to provide utility service (revenue requirements), including a fair return on investment.

DECLINING BLOCK RATES - traditional rate design which charges lower unit costs as volume used increases, usually by larger commercial or industrial users.

DEPRECIATION - the recovery of the cost of facilities over the estimated useful life.

EMERGENCY RATE INCREASE - portion of a requested rate increase authorized by a commission to prevent irreversible financial hardship to a utility, pending the final decision.

EXCEPTIONS - statement of disagreement with an examiner's recommendations to a commission, filed by any party in a rate case.

EXAMINER - commission examiner or a designated senior staff person, assigned by a commission, to conduct the rate case hearings, take and study evidence and make a recommendation to a commission on his or her findings.

FAIR VALUE - current value of a facility, computed by taking the original cost and adding the cost of inflation from the time of construction to the present.

FORECASTED TEST YEAR - (See FUTURE TEST YEAR.)

FUEL COST ADJUSTMENT - rate change which reflects an increase or decrease in the price of fuel used or sold by the utility, granted by a commission in a separate action apart from a general rate case.

FUTURE TEST YEAR - usually the coming year, used as a basis for projecting anticipated cost of service.

HEARING - public meeting at which a utility, intervenors and the commission staff present their arguments on a proposed rate increase.

INTERIM RATE INCREASE - portion of a requested rate increase, authorized by a commission, before the final determination of the rate proceedings because the utility is faced with a severe financial emergency if such partial rate relief is not available immediately.

INTERROGATORIES - requests from a commission staff or intervenors to a utility for supplementary information or clarification on a rate case petition.

INTERVENORS - consumer and other interested groups who participate, with a commission's permission, in rate case hearings by presenting viewpoints and data, and questioning witnesses.

INVERTED RATES - rate design which charges certain users taking large amounts of gas or electricity more than if they used smaller amounts.

INVESTMENT BASE - (See RATE BASE.)

LIFELINE RATES - rate design in which disproportionately low rates are granted to low-income, low-use customers in consideration of their limited finances.

NON-RECURRING COST - one-time-only utility expense, such as repairing damage to facilities due to a storm.

NORMALIZATION - elimination of non-recurring expenses from test year costs.

OPERATING COSTS - expenses incurred by a utility in providing its product or service, including employee wages and benefits, maintenance, advertising and promotion, customer service, materials and supplies, fuel, administration of the company, taxes, depreciation, etc.

ORAL ARGUMENTS - final presentations, granted by a commission, made by any party in a rate case hearing, which expand on remaining major issues.

ORIGINAL COST - amount paid to construct a facility when it was built by the utility.

PREHEARING CONFERENCE - meeting of representatives from a commision, a utility and intervenors to set a schedule of dates for rate case hearings, to limit issues and to establish facts where there is agreement between all parties.

PROFIT - money earned by a utility based on the dollar value of its investment in property and equipment.

PURCHASED GAS ADJUSTMENT CLAUSE - provision which permits a utility to pass on to consumers an increase or decrease in costs for the gas supply it purchases.

RATE BASE (INVESTMENT BASE) - amount of money a utility has invested over the years in facilities that serve the customers, plus the amount of working capital required to keep the company going, less depreciation collected over the years.

RATE CASE - proceeding before a regulatory commission by which a utility seeks a change in the rates it charges its customers.

RATE DESIGN - allocation of the cost of service within a utility's types of customers.

RATE OF RETURN - percentage of a utility's investment allowed the utility as profit, to be paid to stockholders or kept in the business as retained earnings.

RATE ORDER - commission's decision in a rate case, stating the commission's findings on the utility's petition and an explanation of the basis for the order.

REGULATED MONOPOLY - company authorized to provide service in a specific geographic area under an exclusive franchise.

REGULATORY LAG - amount of elapsed time between the time when a rate case petition is filed and the final rate order is issued.

REHEARING - reconsideration of a rate order by a commission, requested by any dissatisfied party in a rate case.

REPLIES TO EXCEPTIONS - responses by parties to the filings of other parties' exceptions.

REPRODUCTION COST - cost of replacing facilities at today's prices.

STAFF REPORT - report of a commission staff on a rate case petition following its investigation.

STRAIGHT LINE RATES - rate design which charges the same unit cost to all customers.

SUBJECT TO REFUND - condition placed on rate increases put into effect without commission action.

SUSPENSION - delay in putting a rate increase into effect until the commission can study and rule on it.

TEST YEAR - a recent 12-month period, in many cases the previous calendar year, used as a basis in estimating future utility costs in a rate case. (Also see FUTURE TEST YEAR.)

TRANSCRIPT - written record of a rate case proceedings, including the utility's case and documentation, its cross-examination, the staff report and witnesses, and the intervenor's presentations and cross-examination.

TYPES OF CUSTOMERS - residential, commercial and industrial groups which purchase a utility's product or service.

Student Notes

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